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(54) **COUPLED SPIN HALL NANO OSCILLATORS WITH TUNABLE STRENGTH**

(71) Applicant: **Intel Corporation**, Santa Clara, CA (US)

(72) Inventors: **Sasikanth Sasi Manipatruni**, Portland, OR (US); **George I. Bourianoff**, Austin, TX (US); **Dmitri E. Nikonov**, Beaverton, OR (US); **Ian A. Young**, Portland, OR (US)

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(57) **ABSTRACT**

Described is an oscillating apparatus which comprises: an interconnect with spin-coupling material (e.g., Spin Hall Effect (SHE) material); and a magnetic stack having two magnetic layers such that one of the magnetic layers is coupled to the interconnect, wherein each of the two magnetic layers have respective magnetization directions to cause the magnetic stack to oscillate.